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February 25, 1986

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Operating Permit Renewal
Gary Development Landfill
OPP 45-2, SW 133
Lake County

Staff has completed their review of the operating permit renewal application for the Gary Development Landfill received at the Division of Land Pollution Control on February 11, 1985. Based on the comments of the inspector, Mr. Steve C. Schafer; the geologist, Mr. Richard T. Jones; and the engineer, Mr. Duane A. Leith, approval of the project is not recommended due to the following summary of noncompliance with regulations and deviations from the construction plans as approved by the Agreed Order dated February 18, 1983:

1. Six of the 28 inspections from August 10, 1982, to August 8, 1985, were rated unacceptable. The facility has not been substantially in compliance with 330 IAC 4-5-13, therefore, denial is required by 330 IAC 4-8-2(a). Sixty percent of the inspections from the 1983 calendar year were rated unacceptable. This is greater than the 40 percent unacceptable ratings allowed in paragraph 9 of the Agreed Order.
2. Item 7 of the Agreed Order specifies soil borings and tests to be performed on the site's west section of the clay perimeter wall. The Order requires that four soil borings be taken. The Order requires that five shelby tube samples be taken, but only four were reported, one from each boring. The information requested on the split spoon samples has not been provided for borings B-1 through B-3. Specifically, the record of blow counts and the log of observations, including any irregularities or voids encountered, must be submitted.

This detailed information presented from boring B-4 does show that there is only two and one-half feet of clay at nine to 11 1/2-foot depth from the surface. Above this is landfill and clay intermixed, and below the clay is sand. Page 12 of the construction plans, received November 17, 1980, which the EMB approved, and which the February 16, 1982, permit renewal and subsequent order referred to, details the wall construction.

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The wall was to have been 25-30 feet in width keyed into the underlying clay to a depth of three feet and with a total depth of over 30 feet. The wall was to slant outward at the top or toward the property line on a one-to-one slope. A vertical boring through the wall under those conditions would encounter 25 feet of clay. The two and one-half foot thickness of clay encountered, shows that the wall thickness is inadequate. It shows that the wall is not keyed into the underlying clay at that point due to the occurrence of sand beneath the clay.

3. Drainage swale A, as shown on sheet 2 of the plans, has not been properly constructed. There is a low spot in this area in which water ponds.
4. Leachate collection components have not been installed, as shown on sheets 3 and 8 of the plans, yet filling has progressed beyond the interim grading stage, shown on sheet 3.
5. Leachate seeps, along the central low area and along the north area, are not being controlled or stopped. This leachate flows directly into, or is washed by precipitation run-off, to the surface water collection pond from which it may be pumped into the Grand Calumet River. There are leachate seeps along the west wall near the water ponded in that area.
6. The vegetative cover has not been established as on page 12 of the Narrative.

The following points should also be considered:

1. The amount of clay available for wall construction and cover visually appears to be inadequate. Calculations based on the renewal map received February 11, 1985, and on the proposed excavation depth of 37 feet, projected adequate volume of clay. A recent site visit casts doubt on the accuracy of the renewal map and on the practicality of excavating 37 feet in an area already plagued with voluminous leachate flows, groundwater infiltration, and precipitation accumulation. A survey is needed to closely determine the area remaining for excavation and to project a realistic excavation depth in order to verify the adequacy of clay volume.
2. Groundwater samples taken on July 26, 1984, and on July 30, 1985, both exhibit groundwater contamination. Levels of numerous parameters are above the interim primary and secondary drinking water levels.

DAL/kp

cc: Mr. David M. Brown
Mr. Steve C. Schafer

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